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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,536	12/05/2003	Toyohiro Nomoto	16869N-102100US	1904

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EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/729,536	NOMOTO ET AL.	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/5/03 & 12/20/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Action is responsive to Applicant's Application, filed December 5, 2003.

Priority

2. Applicant's claim of foreign priority on Japan application 2002-355099 filed December 6, 2002, under 35 U.S.C. 119(a)-(d) or (f) is acknowledged.

Information Disclosure Statement

3. The Information Disclosure Statements filed December 5, 2003 and December 20, 2004 have been considered as signed PTO-1449s attached.

Drawings

3. The drawings filed December 5, 2003 have been accepted.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 5-6 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the claims, the elements "executing the storage job to instruct the storage to copy the table" and "executing the storage job to instruct a copy of a volume containing the table" are vague on whether storage or server performing the copying operation, further the elements are vague on whether a storage is a storage device or a storage server. Please note copying data is a processing step and can only be processed by a processor having capability to perform processing instructions.

6. Claims 1, 5-6 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. In the claimed subject matter of copying a table performed on storage and converting copied table performed on conversion server, it seems the step of moving the copied table from the storage to the conversion server is omitted.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Arsdale et al. (U.S. Patent Application, 2003/0135480, hereafter "Arsdale") in view of Yoshikawa et al. (U.S. Patent Application, 2003/0023758, hereafter "Yoshikawa").

As per claims 1, 6 and 10, Arsdale teaches "converting table data of a database" (See Abstract where data in a database is converted from current to a different replacement value).

Arsdale does not explicitly teach "separating a data conversion job used for data conversion into a data conversion server job for executing conversion processing on a data conversion server and a storage job for instructing a copy of a table on storage", although Arsdale teaches creating a copy of the original table (See Fig. 4, step 406) and convert the data by clearing records of the original table and processing the records in the copy table (See Figs. 5-6, steps 508 and 603).

However, Yoshikawa teaches "separating a data conversion job used for data conversion into a data conversion server job for executing conversion processing on a data conversion server and a storage job for instructing a copy of a table on storage" (See Figs. 16-17 and [0128]-[0131] where data management server is separated from data conversion server, data is copied by receiving and transmitting within the data management server and further forwarded to the data conversion server).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Yoshikawa's teaching with Arsdale reference by separating data conversion task from other data processing tasks because both references are directed to an overall data receiving, transmitting and conversion processes where data amount may be huge and a proper separation of jobs performing data conversion from data copying and transmitting would have resulted in a smooth user interface to the systems and operation of the systems because of parallel processing and performance improvement.

Arsdale further teaches the following:

"executing the storage job to instruct the storage to copy the table" (See Figs. 1, 4 and [0115] where a copy of original table is created); and

"executing the data conversion server job to perform data conversion of the copied table" (See Fig. 2 and [0040] where a table is converted by an updating process based on copy of original table and conversion table).

As per claims 2, 7 and 11, concerning "in the step to separate the data conversion job into the data conversion server job and the storage job, with reference to table volume mapping information used to associate the table of the database with storage information about the storage in which the table is stored, the storage information about the storage in which the table is stored is included in information about the storage job", Examiner takes an official notice that storage information of a database table is stored in metadata, such as all_tablespaces, all_files and all_tables in Oracle® database management system, where table name is associated with tablespace name, tablespace name is associated with file name and file name contains data storage volume and path information. It is well known to an ordinary skilled in the art that any job refers to data in a database table, including data retrieval or copying, requires a mapping of data from a logical unit to its physical storage and the mapping is implicitly performed by the database management system.

As per claims 3, 8 and 12, Arsdale further teaches "said data conversion server job extracts from the table to be converted only fields which need to be converted, and then

converts the extracted fields" (See [0138] and [0143] where data from a column of a table is extracted and data is inserted to a table).

As per claims 4 and 9, concerning "said data conversion server job refers to the table volume mapping information that associates the table of the database with the storage information about the storage in which the table is stored", Examiner takes an official notice that storage information of a database table is stored in metadata, such as all_tablespaces, all_files and all_tables in Oracle® database management system, where table name is associated with tablespace name, tablespace name is associated with file name and file name contains data storage volume and path information. It is well known to an ordinary skilled in the art that any job refers to data in a database table, including data conversion or updating, requires a mapping of data from a logical unit to its physical storage and the mapping is implicitly performed by the database management system.

As per claim 5, Arsdale teaches "a database conversion server for converting a table of a database" (See Fig. 2 and [0040] where a table is converted by an updating process based on copy of original table and conversion table); and
"storage for storing the database" (See Fig. 1 and [0030]-[0031] where memory unit is provided as a storage to store database data).

Concerning "database conversion server has table volume mapping information that associates the table of the database with storage information about storage in which the

table is stored", Examiner takes an official notice that storage information of a database table is stored in metadata, such as all_tablespaces, all_files and all_tables in Oracle® database management system, where table name is associated with tablespace name, tablespace name is associated with file name and file name contains data storage volume and path information. It is well known to an ordinary skilled in the art that any job refers to data in a database table, including data retrieval or copying, data conversion or updating, requires a mapping of data from a logical unit to its physical storage and the mapping is implicitly performed by the database management system.

Arsdale does not explicitly teach "database conversion server comprising the functions of: with reference to the table volume mapping information, separating a data conversion job used for data conversion into a data conversion server job for executing conversion processing on the database conversion server and a storage job for instructing a copy of the table on the storage", although Arsdale teaches creating a copy of the original table (See Fig. 4, step 406) and convert the data by clearing records of the original table and processing the records in the copy table (See Figs. 5-6, steps 508 and 603).

However, Yoshikawa teaches "database conversion server comprising the functions of: with reference to the table volume mapping information, separating a data conversion job used for data conversion into a data conversion server job for executing conversion processing on the database conversion server and a storage job for instructing a copy of the table on the storage" (See Figs. 16-17 and [0128]-[0131] where data management server is separated from data conversion server, data is copied by

receiving and transmitting within the data management server and further forwarded to the data conversion server).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Yoshikawa's teaching with Arsdale reference by separating data conversion task from other data processing tasks because both references are directed to an overall data receiving, transmitting and conversion processes where data amount may be huge and a proper separation of jobs performing data conversion from data copying and transmitting would have resulted in a smooth user interface to the systems and operation of the systems because of parallel processing and performance improvement.

Arsdale further teaches the following:

"executing the storage job to instruct a copy of a volume containing the table" (See Figs. 1, 4 and [0115] where a copy of original table is created); and

"executing the data conversion server job to perform data conversion of the copied table" (See Fig. 2 and [0040] where a table is converted by an updating process based on copy of original table and conversion table).

Conclusions

9. The prior art made of record

A. U.S. Patent Application 2003/0135480

D. U.S. Patent Application 2003/0023758

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

B. U.S. Patent Application 2002/0099782

C. U.S. Patent Application 2004/0093222

E. U.S. Patent Application 2002/0099748

F. U.S. Patent Application 2002/0154332

G. U.S. Patent 6,988,134

Contact information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Kuen S. Lu

Patent Examiner

April 25, 2006

GRETA ROBINSON
PRIMARY EXAMINER